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THE DIFFERENT FACES OF ENERGY CONSUMERS: TOWARD A BEHAVIORAL ECONOMICS APPROACH

*Saskia Anna Catharina Maria Lavrijssen**

ABSTRACT

In the European legislator's view, energy consumers have an important role to play in achieving the EU energy policy objectives. These include promoting competition, ensuring affordable energy prices and security of supply, as well as contributing to the European environmental and climate goals. Although the legislator has high expectations of energy consumers, empirical research into their behavior has shown that, in practice, they fulfill their role as drivers of competition only partially, if at all. There are also indications that energy consumers do little to reduce carbon dioxide (CO₂) emissions and make hardly if any use of existing opportunities to save energy. This article analyzes what insights from behavioral economics can mean for the legislator's assumptions on the role of energy consumers, as well as for shaping and regulating the energy sector. It also examines the implications of these insights for the practices of energy supervisory authorities entrusted with applying the European energy directives. The possibilities and limitations of the use of behavioral economics' insights in the regulation of the energy sector will be reflected upon.

JEL: K20; K21; K23; K42

I. INTRODUCTION

Since July 1, 2007, the European energy directives have formally allowed energy consumers to choose their suppliers, while the gas and electricity markets in some Member States, such as the Netherlands and the United Kingdom, opened up to retail competition even before 2007.

The European energy directives were originally based on the traditional economic assumption that encouraging competition contributes to the freedom for all household and other consumers to choose their supplier.¹ Consumers' freedom to choose their supplier is one of the objectives of the

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Email: s.a.c.m.lavrijssen@uva.nl. This article is based on the Dutch publication: Saskia A.C.M. Lavrijssen, *De Verschillende Gezichten van de Energieconsument*, Oisterwijk: Boom Juridische Uitgevers 2012.

¹ Kati J. Cseres, *What Has Competition Done for Consumers in Liberalised Markets?*, 4 COMPETITION L. REV. 77, 78 (2008).

energy directives and also has an instrumental function. The European legislator hoped that, by promoting competition and free choice of supplier, supply companies would become more efficient, which in turn would increase the quality of supply and the variety of energy contracts as well as achieve more competitive and affordable energy prices. Furthermore, according to Jan Potters and Henriette Prast, if markets work well, consumers are properly informed, and there is a level playing field, individuals will make the choices most likely to result in achieving their goals in the given circumstances.²

A new perspective, not inextricably linked to market liberalization, is that both the Third Energy Package (the “Third Package”), consisting of two directives and three regulations,³ and the recently modified Directive on Energy Efficiency take the view that consumers have to be encouraged toward more efficient energy use.⁴ The European legislator presumes, therefore, that consumers can also play an active role in reducing CO₂ emissions and in achieving the environmental and climate goals of European energy policy.⁵

Although the legislator has high expectations of energy consumers, empirical research into their behavior has shown that, in practice, they fulfill their role as drivers of competition only partially, if at all.⁶ An alarming European Commission report from 2010 found the retail energy markets to be among the least efficient markets in the European Union. In many EU countries, fewer than 10 percent of consumers have switched to a new electricity supplier.⁷ According to this research, European consumers could have saved up to

² Jan J.M. Potters & Henriette M. Prast, *Gedragseconomie in de Praktijk*, in DE MENSELIJKE BESLISSER: OVER DE PSYCHOLOGIE VAN KEUZE EN GEDRAG 47–60 (Will L. Tiemeijer, Casper A. Thomas & Henriette M. Prast eds., Amsterdam Univ. Press 2009).

³ Directive 2009/72/EC, of the European Parliament and of the Council of 13 July 2009 Concerning Common Rules for the Internal Market in Electricity and Repealing Directive 2003/54/EC, 2009 O.J. (L 211) 55; Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 Concerning Common Rules for the Internal Market in Natural Gas and Repealing Directive 2003/55/EC, 2009 O.J. (L 211) 94; Regulation 713/2009 of the European Parliament and of the Council of 13 July 2009 Establishing an Agency for Cooperation of Energy Regulators, 2009 O.J. (L 211) 1; Regulation 714/2009 of the European Parliament and of the Council of 13 July 2009 on Conditions for Access to the Network for Cross-Border Exchanges in Electricity and Repealing Regulation 1228/2003, 2009 O.J. (L 211) 15; Regulation 715/2009 of the European Parliament and of the Council of 13 July 2009 on Conditions for Access to the Natural Gas Transmission Networks and Repealing Regulation 1775/2005, 2009 O.J. (L 211) 36.

⁴ Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on Energy Efficiency, Amending Directives 2009/125/EC and 2010/30/EU and Repealing Directives 2004/8/EC and 2006/32/EC, 2012 O.J. (L 315) 1.

⁵ *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Energy Roadmap 2050*, COM (2011) 885 final (Dec. 15, 2011); *Commission Green Paper, A 2030 Framework for Climate and Energy Policies*, COM (2013) 169 final (Mar. 27, 2013).

⁶ Ans Kolk, *The Role of Consumers in EU Energy Policy*, 3 CARBON MGMT. 175 (2012).

⁷ *The Functioning of Electricity Retail Markets for Consumers in the European Union*, SEC (2010) 1409 final (Nov. 11, 2010) [hereinafter *The Functioning of Electricity Retail Markets*]; *Energy Markets in the European Union in 2011—Accompanying the Communication from the*

€13 billion if they had switched to another supplier. A low switching percentage may indicate that consumers made little if any use of the opportunity to save on their energy bills. However, the switching percentages alone do not necessarily give an accurate and complete picture of the reality in these specific markets. These percentages have to be analyzed in the wider context of the market's structure and the behavior of market parties, including consumers.⁸ After all, if 10 percent of consumers opt for another supplier and the former monopolist responds by cutting down its tariffs to more competitive levels, the situation of the remaining 90 percent of the consumers may also improve as a result of the latter group voicing dissatisfaction with the current situation.⁹

There are also indications that energy consumers do little to reduce CO₂ emissions and make little if any use of existing opportunities to save energy.¹⁰ Recently, Dirk Brounen, Niels Kok, and John Quigley published an empirical study that found that a significant number (44 percent) of Dutch energy households did not know the amount of their energy bill, and that 40 percent of this group was unable rationally to assess the short- and long-term costs and benefits when considering making their homes more energy efficient.¹¹

The above studies lead to the central theme of this article: What lessons can the European legislator draw from behavioral economics when assigning certain roles to consumers? This relatively new field of study within economics employs psychological insights, based on empirical research, to explain the choices made by individuals.¹² The European Commission and national supervisory authorities are devoting increasing attention to behavioral research in an effort to understand the psychological factors—such as cognitive

Commission: Making the Internal Energy Market Work, Commission Staff Working Document, SWD (2012) 368 final (Nov. 15, 2012).

⁸ ALBERT O. HIRSCHMAN, *EXIT, VOICE, AND LOYALTY: RESPONSES TO DECLINE IN FIRMS, ORGANIZATIONS, AND STATES* (Harvard Univ. Press 1970); Albert O. Hirschman, "Exit, Voice, and Loyalty": *Further Reflections and a Survey of Recent Contributions*, 13 SOC. SCI. INFO. 7 (1974).

⁹ Maarten P. Schinkel, *Operatie MDW: Een Tussenstand*, 4464 ECONOMISCHE STATISTISCHE BERICHTEN 18 (2005); Ulf Schrader, *The Moral Responsibility of Consumers as Citizens*, 2 INT'L J. INNOVATION & SUSTAINABLE DEV. 79 (2007).

¹⁰ Elke U. Weber, *Doing the Right Thing Willingly*, in BEHAVIORAL FOUNDATIONS OF POLICY 380 (Eldar Shafir ed., Princeton Univ. Press 2012).

¹¹ DIRK BROUNEN, NILS KOK & JOHN M. QUIGLEY, *RESIDENTIAL ENERGY LITERACY AND CAPITALIZATION* 3 (Tilburg Univ. 2012), available at <http://www.econtrack.nl/uploads/document/Energy%20Literacy.pdf>.

¹² DANIEL KAHNEMAN, *THINKING FAST AND SLOW* (Penguin 2011); Will L. Tiemeijer & Casper A. Thomas, *Inleiding*, in DE MENSELIJKE BESLISSER: OVER DE PSYCHOLOGIE VAN KEUZE EN GEDRAG, *supra* note 2, at 11; Hans-W. Micklitz, Lucia A. Reisch & Kornelia Hagen, *An Introduction to the Special Issue on "Behavioural Economics, Consumer Policy, and Consumer Law"*, 34 J. CONSUMER POL'Y 271 (2011); Richard Thaler & Cas R. Sunstein, *Libertarian Paternalism Is Not an Oxymoron*, 70 U. CHI. L. REV. 1159 (2003); RICHARD THALER & CAS. R. SUNSTEIN, *NUDGE, IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS* (Yale Univ. Press 2008).

limitations, emotions, moral considerations, biases, perceptions, and heuristics—that influence the actual behavior of energy consumers.¹³ Understanding these factors will help authorities to establish whether consumers can really act in a manner that will help to achieve goals that are in the public interest, such as competition, economic growth, and protection of the environment. And if consumers cannot act in this way, how can authorities achieve a change in behavior that will help attain the legislator's goals?

This article focuses on what insights from behavioral economics can mean for the legislator's assumptions on the role of energy consumers, as well as for shaping and regulating the energy sector. It also examines the possible implications of these insights for the practices of energy supervisory authorities entrusted with applying the European energy directives. For instance, more insights into consumer preferences and behavior can give input to the legislator and supervisory authorities as to how to design the choice architecture—the (legal, economic, social, and factual) context in which consumers make decisions—in the energy sector.¹⁴

Under the Electricity Act of 1998 and the Gas Act of 2000, the Authority for Consumers and Markets (ACM) is the authority responsible for ensuring implementation of the European energy directives in the Netherlands. The U.K. counterpart of the ACM is the Office of the Gas and Electricity Markets (Ofgem). In discussing various instruments for steering consumer behavior, the article refers to examples applied by Ofgem and the ACM. While Ofgem has taken the lead in applying a behavioral approach to regulating the energy sector in the European Union, the ACM has also started pursuing a similar strategy for enhancing consumer participation in the energy markets. While highlighting the practice of the two aforementioned authorities, this article will also refer to recent and essential research into the behavior of energy consumers conducted in other EU Member States (for example, Austria, Germany, Denmark, and France). The results of these researches have a broader relevance, as they illustrate the major impact that small interventions (such as the introduction of default contracts and labeling information) can have on consumer behavior in the energy sector.

The advantages and disadvantages of different instruments and interventions for steering consumer behavior will be analyzed. Furthermore, a distinction will be made between legally binding instruments, economic incentives, and psychological forms of control—in other words, the nudges that can influence consumer behavior. Richard Thaler and Cass Sunstein introduced the term *nudge* to describe psychological steering instruments that push consumers

¹³ OFGEM, WHAT CAN BEHAVIOURAL ECONOMICS SAY ABOUT GB ENERGY CONSUMERS? (Office of Gas and Electricity Markets Discussion Paper 2011), available at <https://www.ofgem.gov.uk/ofgem-publications/75192/behaviouraleconomicsgbenergy.pdf>; OXERA, BEHAVIOURAL ECONOMICS AND ITS IMPACT ON COMPETITION POLICY (2013), available at <https://www.acm.nl/nl/download/bijlage/?id=11161>.

¹⁴ THALER & SUNSTEIN, *supra* note 12, at 3.

in a direction desired by the government.¹⁵ A nudge does not involve any coercion, such as excluding certain options or influencing economic incentives. Instead, the focus is on much softer forms of steering, based on psychological factors that play a crucial role in the process that consumers undergo when making choices; for instance, how changing the default choices may result in significant changes in the market. Thaler and Sunstein refer to the famous research of Eric Johnson and Daniel Goldstein that shows the drastic consequences of changing the explicit consent required for becoming an organ donor (opt in) into presumed consent, where people not wishing to donate organs have to opt out.¹⁶ The latter situation will significantly increase the number of donor organs available. As will be explained below, nudges, such as setting default choices for contracts to supply energy from renewable resources, can also be deployed in the choice architecture for the energy market and can have a major impact on consumer behavior.¹⁷

II. ENERGY CONSUMERS AND THEIR VARIOUS ROLES

A. The Various Faces of Energy Consumers

Before investigating the relevant behavioral economics insights regarding the behavior of energy consumers, it is important to analyze what the legal definitions of different types of energy consumers are on the basis of EU law. This analysis is necessary for ascertaining whether the legal definitions in EU law can sufficiently protect the consumers against unfair and misleading trade practices and empower them to actively engage in the energy market, taking into account the characteristics of different types of consumers that may be distinguished on the basis of behavioral research in the energy market.¹⁸

From a European law perspective, energy consumers have various faces. First, the Third Package's directives distinguish among groups of consumers such as wholesale customers, household customers, non-household customers, and vulnerable customers.¹⁹ Energy consumers can also be looked at from the perspective of the different roles assigned to them by the European legislator that can be fulfilled either actively or passively. This article focuses on the definition and roles of household consumers-customers in the energy directives and the EU consumer protection directives.

¹⁵ THALER & SUNSTEIN, *supra* note 12, at 6.

¹⁶ *Id.* at 184; Eric J. Johnson & Daniel G. Goldstein, *Do Defaults Save Lives?*, 302 POL'Y FORUM 1338 (2003).

¹⁷ Daniel Pichert & Konstantinos V. Katsikopoulos, *Green Defaults: Information Presentation and Pro-Environmental Behaviour*, 28 J. ENVTL. PSYCHOL. 63 (2008).

¹⁸ Bram B. Duivenvoorde, *The Protection of Vulnerable Consumers Under the Unfair Commercial Practices Directive*, 2 J. EUR. CONSUMER & MKT. L. 61 (2013).

¹⁹ Simone Pront-van Bommel, *De Energieconsument Centraal?*, in DE CONSUMENT EN DE ANDERE KANT VAN DE ELEKTRICITEITSMARKT 18 (S. Pront van-Bommel ed., Univ. of Amsterdam, Centrum voor Energievraagstukken 2010).

B. Household Consumers and the Average Consumer

When interpreting the concept of a consumer other than a business or professional customer, the starting point in European consumer law is the average consumer—that is, the reasonably well informed and reasonably observant and circumspect consumer.²⁰ Regarding this standard, Bram Duivenvoorde observed that, from a European law perspective, the consumer is expected to act rationally on the basis of the available information.²¹ Although consumer law offers considerable protection against misrepresentation and misleading behavior (by enterprises) in certain circumstances, consumers themselves, according to Duivenvoorde, are also responsible for ensuring they are not misled. Indirectly, through the criterion of the “average consumer,” the law imposes a behavioral standard on consumers. According to Vanessa Mak, the need to ensure consistent application of the “average consumer” criterion means that the high threshold for consumer protection imposed by this criterion should be lowered only when a higher level of consumer protection is justified.²² The two questions that arise are, first, to what extent does this behavioral standard apply to energy consumers, and, second, can an increased level of protection for these consumers be justified? The next part attempts to answer these questions.

1. Who Is the Average Energy Consumer?

The energy directives do not use the word “consumer,” but the word “household customer” to reflect the households purchasing and using energy.²³ According to Directive 2009/72/EC, a household customer is a “customer purchasing electricity for his own household consumption, excluding commercial or professional activities.”²⁴ It is not immediately clear whether this energy customer-consumer is also expected to act rationally like the average consumer in general consumer law. A closer inspection of the EU energy directives

²⁰ See Case 210/96, Gut Springenheide GmbH v. Oberkreisdirektor des Kreises Steinfurt—Amt für Lebensmittelüberwachung, 1998 E.C.R. I-4657 (ground 37); Rosealla Incardona & Cristina Poncibo, *The Average Consumer, The Unfair Commercial Practices Directive, and the Cognitive Revolution*, 30 J. CONSUMER POL’Y 21 (2007); Vanessa Mak, *Standards of Protection: In Search of the “Average Consumer” of EU Law in the Proposal for a Consumer Rights Directive*, 19 EUR. REV. PRIVATE L. 25 (2011); Jan Trzaskowski, *Behavioural Economics, Neuroscience, and the Unfair Commercial Practices Directive*, 34 J. CONSUMER POL’Y 377 (2011); Sybe A. de Vries, *Consumer Protection and the EU Single Market Rules—The Search for the “Paradigm Consumer,”* 4 J. EUROPEAN CONSUMER & MKT. L. 228 (2012); Duivenvoorde, *supra* note 18.

²¹ Bram B. Duivenvoorde, *De “Gemiddelde Consument” als Rationele Actor*, 141 WEEKBLAD VOOR PRIVAATRECHT, NOTARIAAT EN REGISTRATIE 533 (2010). See also Cees van Dam, *De Gemiddelde Euroconsument—Een Pluriform Fenomeen. Over de Richtlijn Oneerlijke Handelspraktijken en de Rechtspraak van het Hof van Justitie*, 1 SEW 3 (2009).

²² Mak, *supra* note 20, at 42.

²³ Hans-W. Micklitz, *Do Consumers and Businesses Need a New Architecture of Consumer Law? A Thought-Provoking Impulse* 28 (European Univ. Institute of Florence, Working Papers 23, 2012).

²⁴ Directive 2009/72/EC, *supra* note 3, ¶ 10.

reveals that energy consumers are protected and empowered by a significant number of additional rules.

In the Third Package, household consumers are first of all subject to protection, as can be inferred from the emphasis on the importance of guaranteeing and strengthening their rights in the energy market.²⁵ The Third Package's directives grant extra protection to household customers by requiring Member States to ensure that these customers enjoy a universal service. In other words, these customers are entitled to be supplied with electricity and, once connected, with gas, both of a specified quality and at reasonable, easily and clearly comparable, transparent, and nondiscriminatory prices within their territory.²⁶

Under the Third Package's directives, Member States are not only obliged to adopt measures to protect consumers, but also to encourage household consumers to become active market players. The Commission believes that it is not sufficient solely to protect consumers against unfair commercial practices and abuse of market power by energy suppliers. Consumers should also be empowered so that they are confident and able to actively participate in the energy market, as desired by the European legislator. Active consumer participation is assumed to stimulate competition between energy suppliers, leading to more efficiency, more affordable energy prices, and ultimately more economic growth in the European Union.

To stimulate consumer participation, the Third Package's directives contain some minimum requirements concerning consumer empowerment. The notion of "consumer empowerment" is currently a central issue in European consumer policy, both in general consumer law and in the specific consumer law provisions that are applicable to the energy sector.²⁷ The term includes assisting energy consumers by providing them with clear and user-friendly information about their rights, their energy consumption, the price of their energy supply, and effective dispute-settlement and complaint-handling procedures, as well as by providing them with information about access to representative organizations promoting consumers' interests.²⁸ Consumer empowerment sets requirements in respect of the quality of the information required by European law to be provided to energy consumers.²⁹ It is not sufficient for consumers simply to receive an annual bill showing their total energy consumption. Under European law, they also must be informed about their actual energy consumption

²⁵ *Id.* at point 51, Annex I.

²⁶ *Id.* at art. 3; Directive 2009/73/EC, *supra* note 3, art. 3.

²⁷ MICHELA NARDO, MASSIMO LOI, ROSANNA ROSATI & ANNA MANCA, THE CONSUMER EMPOWERMENT INDEX—A MEASURE OF SKILLS, AWARENESS AND ENGAGEMENT OF EUROPEAN CONSUMERS, JRC SCIENTIFIC AND TECHNICAL REPORT NO. EUR 24791 (Publications Office of the European Union, 2011).

²⁸ *Consumer Empowerment in the European Union*, SEC (2011) 469 final (Apr. 7, 2011).

²⁹ Directive 2009/72/EC, *supra* note 3, at point 50–55, art. 3, ¶¶ 3, 5, 7, 9, 11, 12.

and the corresponding costs sufficiently frequently to allow them to adjust their patterns of consumption.³⁰

To ensure that energy consumers have access to data on their actual energy consumption and the corresponding costs, the Third Package's directives encourage Member States to introduce smart metering systems that support consumers' active involvement in the electricity and gas supply markets.³¹ A smart meter is a digital meter that measures electricity consumption in almost real time (that is, in intervals of a quarter of an hour) and allows remote readings.³² The rollout of smart metering systems was already promoted by Article 13 of Directive 2006/32/EC.³³ This directive has recently been repealed, with the new directive setting stricter requirements for the feedback on consumption and costs that must be provided to consumers.³⁴ Smart meters are seen as an enabler of advanced feedback systems that allow registered consumption data to be made available to consumers on a display in their living room or on a website.³⁵ As a smart meter can measure energy consumption in intervals of one-quarter of an hour, energy consumption data can be linked to pricing schemes and demand response programs,³⁶ which are programs that encourage "changes in electric usage by end-use customers from their normal consumption patterns in response to the changes in the price of electricity over time, or to incentive payments designed to induce lower electricity use at times of high wholesale market prices."³⁷ Prices can be transmitted through a display to consumers, who can then assess whether, at a specific moment, it is financially attractive to consume less electricity or to postpone consumption until a later time. It should be noted, however, that the extent to which consumers react to price incentives, rather than to other measures linked to the smart grids, is currently still unclear.³⁸

³⁰ *Id.* at point 50, art. 1, ¶ i.

³¹ *Id.* at art. 2.

³² Commission Recommendation of 9 March 2012 on Preparations for the Roll-Out of Smart Metering Systems (2012/148/EU), 2012 O.J. (L 73) 9; Robin Hoenkamp, George B. Huitema & Adrienne de Moor-van Vugt, *The Neglected Consumer: The Case of the Smart Meter Rollout in the Netherlands*, 4 J. RENEWABLE ENERGY L. & POL'Y 269, 273–82 (2011).

³³ Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on Energy End-Use Efficiency and Energy Services and Repealing Council Directive 93/76/EEC, 2006 O.J. (L 114) 64.

³⁴ Directive 2012/27/EU, *supra* note 4.

³⁵ MARTIJN J. BLOM, MART BLES, COR LEGUIJT, FRANS J. ROOIJERS, ROB VAN GERWEN, DAAN VAN HAMEREN & FRITS VERHEIJ, *MAATSCHAPPELIJKE KOSTEN EN BATEN VAN INTELLIGENTE NETTEN* 31 (CE Delft 2012).

³⁶ Annelies Huygen, *De Consument en de (On)vrije Elektriciteitsmarkt*, in DE CONSUMENT EN DE ANDERE KANT VAN DE ELEKTRICITEITSMARKT, *supra* note 19, at 123–25; Michael G. Pollitt & Irina Shaorshadze, *The Role of Behavioral Economics in Energy and Climate Policy* 7–8 (EPRG Working Paper 1130, Cambridge Univ. 2011).

³⁷ Moustafa M. Eissa, *Demand Side Management Program Evaluation Based on Industrial and Commercial Field Data*, 39 ENERGY POL'Y 5961, 5961 (2011).

³⁸ BLOM, BLES, LEGUIJT, ROOIJERS, VAN GERWEN, VAN HAMEREN & VERHEIJ, *supra* note 35, at 11–14.

2. Producer-Consumers

Consumers are not only active in the market as customers, but sometimes also as producers of electricity, a role in which they are known as “prosumers” (that is, producer-consumers).³⁹ In response to rising energy prices, cheaper techniques for producing energy for own consumption, and the development of smart grids, more and more household consumers are expected in the future to start producing their own energy by, for example, installing solar panels on their roofs or joining an energy cooperative that operates a windmill.⁴⁰ Consumers can then consume the energy they need themselves, while selling the remainder back to the energy suppliers and, depending on the (usually still limited) legal opportunities, to their neighbors.⁴¹ Annelies Huygen has shown that it is possible, in practice, for prosumers to create added flexibility for energy supply companies by supplying energy to the latter in times of shortage or minimizing pressure on the distribution networks by, for example, not using heating pumps at peak loading times.⁴²

The conditions in which consumers can act as producers by selling self-produced energy and offering flexibility to energy companies fall under the Member States’ policy discretion rather than being decided at a European level.⁴³ The energy directives do not yet provide for specific rules relating to the empowerment and protection of energy consumers that (jointly) act as energy producers. This represents a tremendous challenge for energy legislators. Existing European and national energy legislation is based largely on the specific technological model of a few big power plants covering the energy needs of all energy users within a certain territory. The question of how the current legal framework can be adapted to take adequate account of the growing number of smaller-scale, local projects producing energy from renewable energy sources has yet to be answered.⁴⁴

3. Vulnerable Consumers

The tension between the standard of the reasonably well informed and reasonably observant and circumspect consumer on the one hand and the average energy consumer on the other is also exposed by the acknowledgement in the Third Package’s directives that additional protection is needed for certain

³⁹ Pront-van Bommel, *supra* note 19, at 24–27.

⁴⁰ *Id.* at 24–27; INTERNATIONAL ENERGY AGENCY, WORLD ENERGY OUTLOOK 2012—EXECUTIVE SUMMARY (IEA Publications 2012).

⁴¹ SANNE AKERBOOM, GERRIT BUIST, ANNELIES HUYGEN & ANNETJE OTTOW, SMART GRID PILOTS—HANDVATTEN VOOR TOEPASSING VAN WETTEN REGELGEVING—NASLAG: ACHTERGROND EN VERDIEPING (Univ. of Amsterdam, Centrum voor Energievraagstukken, Univ. of Utrecht, Europa Institute, TNO 2011).

⁴² Huygen, *supra* note 36, at 128.

⁴³ AKERBOOM, BUIST, HUYGEN & OTTOW, *supra* note 41, at 45.

⁴⁴ COUNCIL OF THE EUROPEAN UNION, COUNCIL CONCLUSIONS ON RENEWABLE ENERGY (Council of the European Union 2012).

groups of household consumers, specifically vulnerable consumers. Vulnerable consumers can be seen as a group of consumers that have difficulties participating in and “cop[ing] with the requirements of the modern consumer society.”⁴⁵ Therefore they risk ending up with overly expensive energy contracts and being excluded from technological innovations such as the development of smart meters, smart grids, and demand response programs.⁴⁶

The Member States have to adopt measures to protect vulnerable customers, but have considerable freedom in determining which consumers fall within this group and which do not.⁴⁷ The concept of vulnerability may refer to energy poverty, a situation in which a person has difficulty meeting his or her own basic energy needs.⁴⁸ When determining the limits of the vulnerable consumers group, the legislator has to be aware that this is not a clearly defined, static group of consumers.⁴⁹ Qualifying groups as vulnerable is difficult, as vulnerability may depend on the individual and his or her specific situation.⁵⁰ The definition consequently has to leave sufficient scope for assigning appropriate weightings to a series of multidimensional (personal and external) factors contributing to the vulnerability.⁵¹ These factors can create barriers preventing some consumers from gathering and processing information and gaining access to advice and support. These in turn may make it difficult for such consumers to find the contracts best suited to their situation.⁵² Member States may not only take measures to protect vulnerable consumers against energy poverty, but also help them to benefit from demand response programs and other technological innovations to prevent them from being excluded from participating in the energy sector and from social and economic life in general.⁵³

4. Consumers as Citizens

In addition to the specific consumer protection and empowerment rules, the energy directives also contain provisions that stimulate consumers to act as

⁴⁵ Micklitz, *supra* note 23, at 21.

⁴⁶ SOPHIE NEUBURG, SMART GRIDS: FUTURE PROOFED FOR CONSUMERS? (Consumer Futures 2013).

⁴⁷ Directive 2009/72/EC, *supra* note 3, at art. 3, ¶ 7.

⁴⁸ FREDERIC HUYBRECHS, SANDRINE MEYER & JAN VRANKEN, ENERGIEARMOEDE IN BELGIË/LA PRÉCARITÉ ÉNERGÉTIQUE EN BELGIQUE: FINAL REPORT 42 (Free Univ. of Brussels [ULB] (CEESE), Univ. of Antwerp (OASes) 2011).

⁴⁹ OFGEM, PROPOSALS FOR A NEW CONSUMER VULNERABILITY STRATEGY 11–12 (Office of Gas and Electricity Markets Consultation Paper 124/12, 2012).

⁵⁰ Duivenvoorde, *supra* note 18, at 61–65.

⁵¹ MIKE GEORGE, COSMO GRAHAM & LINDA LENNARD, TOO MANY HURDLES: INFORMATION AND ADVICE BARRIERS IN THE ENERGY MARKET 49–73 (Univ. of Leicester, Centre for Consumers and Essential Services 2011); OFGEM, CONSUMER VULNERABILITY STRATEGY—FINAL DECISION 102/13, at 12–18 (Office of Gas and Electricity Markets 2013).

⁵² Marija Bartl, *The Affordability of Energy*, 33 J. CONSUMER POL’Y 225, 232–33 (2010); GEORGE, GRAHAM & LENNARD, *supra* note 51, at 4–5.

⁵³ NEUBURG, *supra* note 46.

environmentally responsible consumers.⁵⁴ The idea of the responsible consumer is strongly related to the concept of consumers as citizens. This latter concept reflects the idea that, by making economic decisions in the market and exercising their political rights as citizens, household consumers may also direct the way in which this market should operate, at least in their opinion.⁵⁵ For instance, by exercising their right to vote and taking part in decision-making processes, consumers exert their influence as citizens on the laws governing the energy markets and the roles that consumers play within these markets.⁵⁶

As citizens, energy consumers possess certain rights, but they are also assumed to have certain responsibilities to consider ethical, social, and environmental issues when exercising these rights and when participating in the market.⁵⁷ Energy consumers have in their capacity as citizens a core right to enjoy a universal service, as laid down in the energy directives.⁵⁸ Energy supply is seen as a service of general economic interest within the meaning of Article 106 TFEU and Article 36 of the EU Charter on Fundamental Rights. Member States have to take the measures needed to ensure that energy consumers genuinely have access to energy on reasonable, affordable, and non-discriminatory terms.⁵⁹ At their turn as citizens, consumers are expected to make conscious and well-informed choices when exercising their right to choose their own energy supplier.⁶⁰ In making this choice, they should consider aspects such as the environment by informing themselves, for example, about green energy. They are expected to be aware of the environmental consequences of their own energy consumption. The roll-out of smart meters discussed above is not only important as a means of encouraging consumers to be active market players: by providing information about actual energy consumption and making behavioral change possible, smart meters will also help

⁵⁴ HANS-W. MICKLITZ, ANDREAS OEHLER, MICHAEL-B. PIORKOWSKY, LUCIA A. REISCH & CHRISTOPH STRTÜNCK, STATEMENT BY THE SCIENTIFIC ADVISORY BOARD ON CONSUMER AND FOOD POLICIES AT THE FEDERAL MINISTRY OF FOOD, AGRICULTURE AND CONSUMER PROTECTION OF GERMANY (BMELV) (2010).

⁵⁵ Lucia A. Reisch & Hans-W. Micklitz, *Consumers and Deregulation of the Electricity Market in Germany*, 29 J. CONSUMER POL'Y 399, 403–15 (2006); Sue McGregor, *Consumer Citizenship: A Pathway to Sustainable Development?*, in DEVELOPING CONSUMER CITIZENSHIP—CONFERENCE REPORT AND PROJECT PROGRESS REPORT i–xix (V. W. Thoresen ed., Hedmark Univ. College 2002); VICTORIA W. THORESEN, DEVELOPING CONSUMER CITIZENSHIP—CONFERENCE REPORT AND PROJECT PROGRESS REPORT (Hedmark University College 2002).

⁵⁶ Reisch & Micklitz, *supra* note 55, at 403; Jim Davies, *Entrenchment of New Governance in Consumer Policy Formulation: A Platform for European Consumer Citizenship Practice?*, 32 J. CONSUMER POL'Y 245 (2009).

⁵⁷ Schrader, *supra* note 9, at 81–83; Kati J. Csere & Annette Schrauwen, *Empowering Consumer-Citizens: Changing Rights or Merely Discourse?* 15 (Amsterdam Centre for European Law and Governance, Research Paper No. 2012-03, 2012).

⁵⁸ Directive 2009/72/EC, *supra* note 3, at art. 3, ¶ 2.

⁵⁹ Jim Davies & Erica Szyszczak, *Universal Service Obligations: Fulfilling New Generations of Services of General Economic Interest*, in DEVELOPMENTS IN SERVICES OF GENERAL INTEREST 155, 159 (Erika Szyszczak, Jim Davies, Mads Andenas & Tarjei Bekkedal eds., Asser Press 2011).

⁶⁰ Schrader, *supra* note 9, at 85.

consumers to consume energy more efficiently and appeal to their responsibility to use energy in a responsible way.⁶¹

C. The Relation Between the Energy Directives and General Consumer Law

From the above, it becomes clear that the EU energy directives impose several additional consumer protection and empowerment rules, such as transparency obligations for energy suppliers, while also specifying the obligations contained in general European consumer law.⁶² Suppliers, for instance, are required always to provide information on applicable prices and tariffs and on the standard terms and conditions for access to and use of electricity services, and not only in the form of the precontractual information required by the Directive on Consumer Rights.⁶³ In case C-92/11, *RWE*, Advocate General Trstenjak considered⁶⁴ that the transparency requirements regarding general contractual terms as set in the Directive 2003/55/EC can be seen as a special implementation within the energy sector of the transparency obligation set in the general consumer Directive 93/13/EC.⁶⁵ In explaining the relationship between sector-related and general consumer law, the Advocate General also referred to a previous case of the Court,⁶⁶ in which she concluded, among other things, that various legislative acts of the European legislator in the area of consumer protection are bound to each other, and that each must be seen as part of a global and uniform system of complementing measures.⁶⁷

Although the energy directives provide an additional level of protection and empowerment to the household energy consumers, no satisfactory answer has yet been found to the question of whether the average energy consumer is the same as the average consumer (“the reasonably well informed and reasonably observant and circumspect consumer”) in general EU consumer law. Given the additional consumer protection requirements in the Third Package, the European legislator would seem to be aware that energy consumers need additional advice,

⁶¹ Directive 2009/72/EC, *supra* note 3, at point 5.

⁶² Gordon Downie & Natasha Durkin, *Consumer Protection in the Energy Sector: The Possibility of Redress and the Impact of the New Consumer Rights Directive*, 19 UTILITIES L. REV. 135 (2012).

⁶³ Directive 2009/72/EC, *supra* note 3, at point 1b; Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on Consumer Rights, Amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and Repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council, 2011 O.J. (L 304) 64, art. 5.

⁶⁴ See Case 92/11, *RWE Vertrieb v. Verbraucherzentrale Nordrhein-Westfalen eV*, 2012 E.C.R. (Advocate General V. Trstenjak’s Conclusion at point 69), available at <http://curia.europa.eu/juris/liste.jsf?num=C-92/11>.

⁶⁵ Directive 2011/83/EU, *supra* note 63 (Directive Amended Through the Introduction of the Directive on Consumer Rights in 2011).

⁶⁶ Case 453/10, *Jana Pereničová, Vladislav Perenič v. S.O.S. financ, spol. sro*, 2011 E.C.R., available at <http://curia.europa.eu/juris/liste.jsf?num=C-453/10>.

⁶⁷ *Id.* at point 88.

transparent and user-friendly information on prices and conditions, as well as up-to-date and frequent feedback on their energy consumption, if they are to make choices that are in their own interests.⁶⁸ In this line of reasoning, a higher level of protection is justified, especially for vulnerable consumers.

Looking at these developments, the standard of the “average energy consumer” seems not to be the same as the standard of the “average consumer,” to which the European Court of Justice refers when interpreting general European consumer law.⁶⁹ However, the energy directives do provide leeway to deviate from this latter standard. Regarding the average consumer test from the Unfair Commercial Practices Directive, Jan Trzaskowski considers that “the average consumer test is flexible enough to allow the inclusion of research within human decision making in order to apply a more realistic average consumer than the currently applied Homo Economicus, who is expected to be more rational than the ‘real’ average consumer.”⁷⁰ This reflection seems also to apply to the average energy consumer, leaving scope for the inclusion of a more realistic view of the energy consumer when interpreting the specific provisions on consumer protection and empowerment of the energy directives.

D. Toward a Target Group Specific Consumer Policy

Overall it seems that the European legislation is based on the assumption that the consumer behaves or should behave in a rational or a “mature” and “responsible” way.⁷¹ However, a paradox can be signaled. On the one hand, European and national legislators have high expectations of average energy consumers as far as promoting competition and achieving the European environmental and climate goals are concerned. On the other hand, the European legislator is increasingly aware that average energy consumers have to be empowered if they are to fulfill the roles of active and responsible consumers that were assigned to them. There is a growing understanding that, in reality, consumers behave differently than expected by the legislator. A large number of consumers seem to act as “trusting consumers,” in that they have too little time and too little patience to make well-informed decisions. In making their decisions, many consumers trust on the information that is readily presented to them and depend on support from intermediaries they trust (such as the existing supplier).⁷² The European legislator increasingly deals with the features of the real behavior of energy consumers. These developments indicate that energy consumers—and within this group, vulnerable energy consumers—are subject to a targeted, group-specific consumer policy. A targeted,

⁶⁸ Duivenvoorde, *supra* note 21, at 3.

⁶⁹ Incardona & Poncibo, *supra* note 20, at 21–38; Mak, *supra* note 20, at 25.

⁷⁰ Trzaskowski, *supra* note 20, at 391.

⁷¹ MICKLITZ, OEHLER, PIORKOWSKY, REISCH & STRÜNCK, *supra* note 54, at 1–3.

⁷² *Id.*

group-specific consumer policy in the energy sector could be legitimized by the following reasons:

The energy retail market is characterized by certain features (contracts, information, pricing models, uncertain costs, and benefits) that make it more difficult for energy consumers to make optimal decisions in comparison with other markets.

Therefore there is a risk that consumers do not make decisions that are in their own interests and this threatens their right to universal service and—in the case of vulnerable customers—may lead to energy poverty, social exclusion, and health problems.

In addition, these developments may result in external effects such as less competition on the retail market and negative effects for the environment (for example, because of an inefficient use of energy).

However, the specific consumer policy in the energy sector is based on a piecemeal approach and not on an adequate, transparent, and consistent justification for the deviation from the concept of the average consumer in EU law. Behavioral economics studies of consumer behavior in the energy sector are analyzed below in order to identify the characteristics of this behavior and the potential bottlenecks preventing consumers from realizing the roles anticipated by the legislator. It will be analyzed what these behavioral insights mean for consumer policy in the energy sector and whether they can help to provide legitimization for a target group specific consumer policy in the energy sector.

III. CONSUMERS AND THE FREEDOM OF CHOICE

A. Econs or Humans?

Traditional (neoliberal) economics and legislation are based on the assumption of the rational choice model, according to which most consumers are *Homo Economicus* (“Econs”).⁷³ This theory sees consumers as perfect textbook examples of people who make economic decisions that maximize their welfare, based on rational convictions and with sufficient knowledge and information.⁷⁴ In practice, however, most people seem to be *Homo Sapiens* (“Humans”—as referred to by Thaler and Sunstein). Human choice behavior is often based on incorrect estimations of costs and benefits (biases) and is strongly influenced by contextual factors, such as the way in which goods and product information are presented (framing). This means that choices made do not always maximize an individual’s profits.⁷⁵ Economists can approach these phenomena in two ways.

⁷³ THALER & SUNSTEIN, *supra* note 12, at 7.

⁷⁴ Russel B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CALIF. L. REV. 1051 (2000).

⁷⁵ THALER & SUNSTEIN, *supra* note 12, at 7; Eric van Dijk & Marcel Zeelenberg, *De (Ir) rationaliteit van de Beslissers*, in DE MENSELIJKE BESLISSER: OVER DE PSYCHOLOGIE VAN KEUZE EN GEDRAG, *supra* note 2, at 24, 25–43; Korobkin & Ulen, *supra* note 74.

On the one hand, non-optimal choices by consumers can be explained, at least in part, by traditional economic theory. On the other hand, they can also be explained, again in part, from a behavioral economics perspective. Both perspectives seem possible and are not necessarily mutually exclusive.

If the phenomena are studied using the traditional choice model, the theory most likely to be chosen will be the theory of bounded rationality.⁷⁶ This theory is based on the assumption that people are not irrational. They are aware of the information available and the corresponding transaction costs associated with the economic choices they must make. Sometimes, after weighing the search and information costs, they deliberately, however, do not make a well-informed choice. If, for example, a consumer will save €20 a year by switching to another energy supplier, but it will take that consumer half a day to identify the best option, the consumer may decide to stay with the current supplier and to devote his free time to friends, hobbies, or the like. This choice is not in line with the active conduct that the legislator expects from consumers, but in the given circumstances is nevertheless a rational choice.⁷⁷ Measures to minimize consumers' search and transaction costs also accord with the traditional choice theory. These can include imposing additional requirements for the provision of information on contracts, prices, and conditions, as well as promoting quicker and easier switching procedures.

Nudge by Thaler and Sunstein, as well as the work of Tversky and Kahneman, follows the second approach:⁷⁸ that of behavioral economics. This approach takes more account of the psychological reality behind the process of choosing and sees consumers as creatures who often cannot make the choice—even if they want to—that is optimal for their situation.⁷⁹ According to Eric Van Dijk and Marcel Zeelenberg, behavioral economics not only challenges the assumption underlying the rational choice model, but also, and above all, attempts to add a new perspective by focusing on the psychological decision-making process.⁸⁰ Measures that government authorities can take to encourage consumers to make the choices governments desire are seen as paternalistic by neoliberal economists and fall out of the rational choice model's scope. These measures may include providing convenient, user friendly information on the characteristics and usage of products and services, providing comparisons between the choice behavior and the behavior of neighbors or role models (herd effect), or playing with default choices.

⁷⁶ Herbert A. Simon, *A Behavioral Model of Rational Choice*, 69 Q.J. ECON. 99 (1955).

⁷⁷ Schinkel, *supra* note 9, at D18–D20.

⁷⁸ THALER & SUNSTEIN, *supra* note 12; Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 ECONOMETRICA 263 (1979); Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty, Heuristics and Biases*, 185 SCIENCE 1124 (1974).

⁷⁹ THALER & SUNSTEIN, *supra* note 12; Korobkin & Ulen, *supra* note 74; Daniel Kahneman, *Maps of Bounded Rationality: Psychology for Behavioral Economics*, 93 AM. ECON. REV. 1449–75 (2003).

⁸⁰ Van Dijk & Zeelenberg, *supra* note 75, at 27.

Making a choice between the above approaches does not fall within the scope of this article. It does, however, provide sufficient leads to allow policy-makers to rely on a rational choice model while taking the insights from behavioral economics into account when formulating and implementing consumer policy in the energy sector.⁸¹ As will be discussed below, various academic research—as well as studies conducted in the energy sector by or on behalf of the European Commission, the ACM, Ofgem and other supervisory authorities—indicate that, when entering into energy supply contracts, consumers often fail to make optimal choices in terms of price and quality.⁸² This is partly the result of psychological factors that influence consumers' behavior. Building on earlier behavioral insights, Michael Pollitt and Irina Shaorshadze recognize four categories of consumer biases that put traditional assumptions on the rationality of energy consumers into perspective.⁸³

B. Time-Varying Discounts or Present-Biased Preferences

The first of these categories, according to Pollitt and Shaorshadze, is time-varying discount rates or hyperbolic time discounting, which is also referred to as present-biased preferences.⁸⁴ This is the phenomenon whereby consumers' preferences change depending on the periods within which they receive certain financial benefits or have to pay for certain costs. These changing consumer preferences are not based on an objective assessment of the costs and benefits of various decisions, but on the immediate satisfaction of financial or other needs. Often, consumers are tempted to assign more weight to short-term (immediate) benefits than to longer-term benefits.⁸⁵

It appears, for example, that consumers buying a dishwasher usually opt for a cheaper, less energy-efficient model. Here, they act from a short-term

⁸¹ Amitai Etzioni, *Behavioural Economics: Next Steps*, 34 J. CONSUMER POL'Y 277 (2011); Franziska Rischkowsky & Thomas Döring, *Consumer Policy in a Market Economy: Considerations from the Perspective of the Economics of Information, the New Institutional Economics as well as Behavioural Economics*, 31 J. CONSUMER POL'Y 285 (2011).

⁸² ECME CONSORTIUM, THE FUNCTIONING OF RETAIL ELECTRICITY MARKETS FOR CONSUMERS IN THE EUROPEAN UNION (EAHC/FWC/2009 86 01, 2010); EUROPEAN COMMISSION 2010, *supra* note 7; ACM, EVALUATIE ELEKTRICITEITSWET 1998 EN GASWET—EINDVERSLAG (Authority for Consumers and Markets [Autoriteit Consument en Markt] 2012); OFGEM, WHAT CAN BEHAVIOURAL ECONOMICS SAY ABOUT GB ENERGY CONSUMERS?, *supra* note 13.

⁸³ Pollitt & Shaorshadze, *supra* note 36, at 3 (referring to Tversky & Kahneman, *Judgment Under Uncertainty*, *supra* note 78; Kahneman & Tversky, *Prospect Theory*, *supra* note 78; Thaler & Sunstein, *supra* note 12; THALER & SUNSTEIN, *supra* note 12; Colin F. Camerer, George Loewenstein & Drazen Prelec, *Neuroeconomics: Why Economics Needs Brains*, 106 SCANDINAVIAN J. ECON. 555 (2004)).

⁸⁴ Pollitt & Shaorshadze, *supra* note 36, at 4. See also George Loewenstein, Leslie K. John & Kevin Volpp, *Using Decision Errors to Help People Help Themselves*, in BEHAVIORAL FOUNDATIONS OF POLICY, *supra* note 10, at 361.

⁸⁵ Loewenstein & Volpp, *supra* note 84; OFGEM, WHAT CAN BEHAVIOURAL ECONOMICS SAY ABOUT GB ENERGY CONSUMERS?, *supra* note 13, at 14; Weber, *supra* note 10.

perspective by letting the benefits of the lower initial investment costs outweigh the longer-term advantages (such as lower energy bills) of purchasing a more expensive, but also more efficient dishwasher. This explains why governments sometimes reward consumers by subsidizing purchases of environmentally friendly equipment, thereby emphasizing the benefits of a more expensive product at the moment of purchase. Another instrument to stimulate the purchase of efficient household appliances by consumers could be the disclosure of information on lifetime energy costs. Steffen Kallbekken, Hakon Sælen, and Erlend Hermansen recently conducted a field experiment over a 5-month period in collaboration with an electric retailer to influence sales of energy-efficient household appliances.⁸⁶ Potential buyers of fridge-freezers and tumble driers were provided information on the lifetime energy costs of household appliances through a label and training of sales staff. For tumble driers, the combined strategy reduced the average energy use of tumble driers sold by 4.9 percent (whereas for fridge freezers, no significant effect was found). In the case of the sales staff training strategy, this number was 3.4 percent. The study shows that, under certain conditions, making energy costs more salient to consumers can induce consumers to buy more energy-efficient household appliances, at least when it concerns appliances with high energy costs. Consequently, there is potential for the realization of more energy savings and reduction in emissions in the sale of appliances, which deserves further investigation.⁸⁷

Similar to the purchase of household appliances, consumer decision making also tends to be influenced by present-biased preferences when concluding energy contracts. Consumers may in the short term allow the costs of searching for the best energy contract to outweigh the potential longer-term financial benefits they could achieve if they were to switch suppliers.⁸⁸ This is why consumers are more likely to opt for an offer from their current energy supplier without comparing it to offers by other energy suppliers. More targeted information strategies could be applied by supervisory authorities to make consumers aware of the short-term and long-term benefits of different types of energy contracts.

C. Prospect Theory

Second, Pollitt and Shaorshadze refer to the prospect theory developed by Kahneman and Tversky, whereby consumers do not make decisions by weighing the expected absolute costs and benefits of certain economic choices

⁸⁶ Steffen Kallbekken, Hakon Sælen & Erlend A.T. Hermansen, *Bridging the Energy Efficiency Gap: A Field Experiment on Lifetime Energy Costs and Household Appliances*, 36 J. CONSUMER POLICY 1 (2013).

⁸⁷ Kallbekken, Sælen & Hermansen, *supra* note 86, at 9–15.

⁸⁸ OFGEM, WHAT CAN BEHAVIOURAL ECONOMICS SAY ABOUT GB ENERGY CONSUMERS?, *supra* note 13, at 14.

against each other, but instead by assessing the extent to which a choice differs from specific reference points.⁸⁹ As well as possession, the status quo is another example of a reference point in relation to which consumers are loss averse.⁹⁰ In other words, consumers strongly prefer to prevent potential losses rather than achieve potential gains, and thus show more willingness to take risks to prevent loss than risks to achieve a profit. This results in a status quo bias and inertia, with consumers feeling disinclined to investigate whether choosing a different contract or another supplier would be beneficial. This in turn prevents them from making a move.⁹¹ Empirical studies into consumer behavior in the energy sector indicate that consumers have a preference for the status quo and are loss averse. Energy consumers often report satisfaction with the quality of the services offered by their own supplier, without even comparing the prices and quality of these services with those of competitors.⁹² This explains why consumers do not switch suppliers or may continue to use their supplier's default options (contracts that are preselected by the energy suppliers), even though these are not always the most favorable for them. This behavior may be strengthened by the fact that consumers may interpret defaults as implicit recommendations of the companies or public authorities as good options.⁹³ Another relevant factor is that consumers may be afraid of losing benefits (switching costs), such as reliability or a certain level of service.⁹⁴

Some recent empirical studies illustrate that the power of defaults may be strong in the energy sector where many energy consumers "are reluctant to actively choose a new power provider and do not opt out of the defaults."⁹⁵ For instance, Kaenzig, Heinzle, and Wüstenhagen conducted a survey among 414 customers in Germany to investigate the hypothesis "whether consumers are willing to pay a significant price premium for an upgrade from the current default electricity mix to a more environmentally friendly electricity mix."⁹⁶

⁸⁹ Pollitt & Shaorshadze, *supra* note 36, at 4; KAHNEMAN, *supra* note 12, pt. IV; Kahneman & Tversky, *Prospect Theory*, *supra* note 78.

⁹⁰ Daniel Kahneman, Jack L. Knetsch & Richard H. Thaler, *Anomalies: The Endowment Effect, Loss Aversion and Status Quo Bias*, 5 J. ECON. PERSP. 193 (1991).

⁹¹ THALER & SUNSTEIN, *supra* note 12, at 8, 37.

⁹² *The Functioning of Electricity Retail Markets*, *supra* note 7, at 11; OFGEM, WHAT CAN BEHAVIOURAL ECONOMICS SAY ABOUT GB ENERGY CONSUMERS?, *supra* note 13, at 13; ACM, TRENDRAPPORTAGE MARKTWERKING EN CONSUMENTENVERTROUWEN IN DE ENERGIEMARKT —TWEDE HALFJAAR 2011 (Authority for Consumers and Markets [Autoriteit Consument en Markt] 2012) [hereinafter ACM TRENDRAPPORTAGE 2011].

⁹³ Pichert & Katsikopoulos, *supra* note 17, at 7.

⁹⁴ KAHNEMAN, *supra* note 12, at 291; OFGEM, WHAT CAN BEHAVIOURAL ECONOMICS SAY ABOUT GB ENERGY CONSUMERS?, *supra* note 13, at 13; Pichert & Katsikopoulos, *supra* note 17.

⁹⁵ Josef Kaenzig, Stefanie L. Heinzle & Rolf Wüstenhagen, *Whatever the Customer Wants, the Customer Gets? Exploring the Gap Between Consumer Preferences and Default Electricity Products in Germany*, 53 ENERGY POL'Y 311, 311 (2013). See also Cas R. Sunstein & Lucia A. Reisch, *Automatically Green: Behavioral Economics and Environmental Protection* 7–8 (Social Science Research Network 2013), available at <http://ssrn.com/abstract=2245657>.

⁹⁶ Kaenzig, Heinzle & Wüstenhagen, *supra* note 95, at 311.

The results of the study could confirm this hypothesis for customers in Germany, and another earlier study provided for similar results in Switzerland.⁹⁷ These studies illustrate that there may be a serious mismatch between the actual preferences of energy consumers and the contracts that they have actually concluded with energy suppliers. Another study (on the basis of two natural experiments and two laboratory experiments conducted in Germany) showed that the presentation of information about energy contracts might have serious consequences for the contracts into which consumers are entering. The changing of grey defaults into green defaults may lead to a significant increase of the share of consumers buying green energy, even if the green option is more expensive than the grey one.⁹⁸

Though defaults may have a serious impact on the way consumers make decisions, the actual impact of defaults will depend on contextual factors, such as the income and social environment of consumers.⁹⁹ For instance, the green (but more expensive) options may be less attractive for low-income groups. Furthermore, more experienced consumers may be less influenced by defaults than inexperienced consumers. The attenuating effect of experience on the impact of defaults was, for instance, shown by a field experiment of Löfgren, Martinsson, Hennlock, and Sterner.¹⁰⁰ The experiment was conducted among participants of the 16th Annual Conference of the European Association of Environmental and Resource Economists (EAERE)—who were assumed to have “experience with carbon offsetting”—regarding their behavior in compensating for the CO₂ emissions that were related to their flights to the conference venue.¹⁰¹ The researchers did not find significant effects of the default option on the offsetting behavior of the conference participants.

The abovementioned insights explain why consumers who are satisfied with their current energy supplier are reluctant to switch simply in order to achieve the potential gains that a new supplier may be able to offer. If the information on tariffs is also too complex, or the comparison of tariffs complicated and time-consuming, this will merely accentuate the bias toward the status quo.¹⁰² As will be discussed below, these findings may have significant consequences for designing the choice architecture in the energy sector in order to reach public policy goals, such as the EU environmental and climate goals.

⁹⁷ Andreas Burkhalter, Josef Kaenzig & Rolf Wüstenhagen, *Kundenpräferenzen für Leistungsrelevante Attribute von Stromprodukten*, 33 ZEITSCHRIFT FÜR ENERGIEWIRTSCHAFT 161 (2009).

⁹⁸ Pichert & Katsikopoulos, *supra* note 17, at 5.

⁹⁹ Sunstein & Reich, *supra* note 95, at 14–15.

¹⁰⁰ Åsa Löfgren, Peter Martinsson, Magnus Hennlock & Thomas Sterner, *Are Experienced People Affected by a Pre-Set Default Option—Results from a Field Experiment*, 63 J. ENVTL. ECON. & MGMT. 66 (2012).

¹⁰¹ Löfgren, Martinsson, Hennlock & Sterner, *supra* note 100, at 67.

¹⁰² OFGEM, WHAT CAN BEHAVIOURAL ECONOMICS SAY ABOUT GB ENERGY CONSUMERS?, *supra* note 13, at 13.

D. Simplified Choice Strategies

Consumers are cognitively limited and experience barriers when processing information, a phenomenon that can also be placed under the theory of bounded rationality.¹⁰³ According to the rational choice model, consumers consciously assess search costs and gains to be achieved. Within a behavioral economics approach, the assumption is that consumers do not usually make this assessment, but in fact perform an intuitive judgment based on simplified choice strategies and decision-making rules of thumb that do not necessarily result in optimal choices.¹⁰⁴

The frequently cited study of Iyengar and Lepper shows that although people like to be able to choose, a greater range of choices does not necessarily make them happier.¹⁰⁵ On the contrary, they can even become dissatisfied (choice overload phenomenon).¹⁰⁶ As a result, consumers often fail to maximize their use of information; instead, they stop searching at a certain point and choose the first acceptable offer they encounter. The complexity of tariff information and the wide variety of tariff options in the energy sector constitute significant barriers to switching.¹⁰⁷ Consumers may consequently opt for simpler strategies that minimize efforts to search for an energy supplier and a supply contract.¹⁰⁸ Rather than choosing the optimal offer, they may simply opt for the first contract they encounter that offers to supply energy on acceptable conditions and at acceptable tariffs. They may also decide not even to start searching for a better energy supply contract.¹⁰⁹ They may also be optimistic enough to think “I have managed my energy supply well,” whereas the perceived costs of searching for a new energy supplier may not in practice actually outweigh the gains that such a contract can offer. The abovementioned insights should be taken into account by supervisory authorities when designing remedies for energy suppliers to provide information on energy contracts, tariffs, and conditions. Indeed, more information may deactivate consumers instead of activating them.

¹⁰³ Pollitt & Shaorshadze, *supra* note 36, at 4; Simon, *supra* note 76.

¹⁰⁴ Tversky & Kahneman, *Judgment Under Uncertainty*, *supra* note 78; THALER & SUNSTEIN, *supra* note 12.

¹⁰⁵ Sheena Iyengar & Mark R. Lepper, *When Choice Is Demotivating: Can One Desire Too Much of a Good Thing?*, 79 J. PERSONALITY & SOC. PSYCHOL. 995 (2000).

¹⁰⁶ *Id.*; VAN DIJK & ZEELBERG, *supra* note 75, at 30.

¹⁰⁷ OFGEM, WHAT CAN BEHAVIOURAL ECONOMICS SAY ABOUT GB ENERGY CONSUMERS?, *supra* note 13; *The Functioning of Electricity Retail Markets*, *supra* note 7, at 21; ACM, MONITOR CONSUMENTENMARKT ELEKTRICITEIT EN GAS 2010 ch. 5 (Authority for Consumers and Markets [Autoriteit Consument en Markt] 2011); ACM, ONDERZOEK KWALITEIT VAN PRIJSVERGELIJKERS VOOR ENERGIE (Authority for Consumers and Markets [Autoriteit Consument en Markt] 2011); MARKET RESPONSE, HELP CONSUMENTEN DOOR DE BOMEN HET BOS TE ZIEN—RAPPORTAGE | KWANTITATIEF ONDERZOEK NAAR KETENTRANSPARANTIE ENERGIEBRANCHE (Report prepared for ACM 2013).

¹⁰⁸ OFGEM, WHAT CAN BEHAVIOURAL ECONOMICS SAY ABOUT GB ENERGY CONSUMERS?, *supra* note 13, at 11.

¹⁰⁹ *Id.* at 11–13.

E. Prosocial Behavior

Fourth, according to traditional economic theory, consumers make choices that are in their interests.¹¹⁰ Behavioral economics studies show that primacy and maximizing their own gains are not always key drivers of the choice behavior of consumers.¹¹¹ Consumers are ready to adopt prosocial behavior in the sense that, when making consumption decisions, they also take public interests, such as a clean environment, into consideration.¹¹² Pro-environmental behavior also accords, at least partially, with the rational choice model, as consumer preferences may also include a preference for a clean environment. It is not always easy, however, to attribute an economic value to preferences for environmentally friendly products and services or other prosocial considerations.¹¹³

Energy consumers are also willing to let environmental considerations play a role in their decision making, as evidenced by the fact that more and more consumers are switching to green energy and are willing to pay more for this type of energy.¹¹⁴ The extent to which individual consumers actually engage in pro-environmental behavior depends on contextual factors (such as income and social environment) and psychological factors (such as attitudes and personal norms) and deserves further investigation.¹¹⁵

F. Observations

The above studies indicate that energy consumers do not usually make optimal choices when selecting their energy supply contracts. In other words, they do not act in the rational manner desired by the European legislator, as their choices are biased by hyperbolic discounting, status quo bias, loss aversion, and simplified choice strategies. Instead of acting as responsible and rational consumers, in practice they tend to behave as “trusting consumers.”¹¹⁶

Consequently, many consumers do not switch to more advantageous contracts and so miss out on various financial and qualitative benefits.¹¹⁷ Empirical research from the United Kingdom shows that energy suppliers

¹¹⁰ Pollitt & Shaorshadze, *supra* note 36, at 66.

¹¹¹ VAN DIJK & ZEELLENBERG, *supra* note 75, at 28.

¹¹² Linda Steg & Charles Vlek, *Encouraging Pro-Environmental Behaviour: An Integrative Review and Research Agenda*, 29 J. ENVTL. PSYCHOL. 309 (2009).

¹¹³ POTTERS & PRAST, *supra* note 2, at 55.

¹¹⁴ Kaenzig, Heinzle & Wüstenhagen, *supra* note 95, at 311; *The Functioning of Electricity Retail Markets for Consumers in the European Union*, *supra* note 7; ACM TRENDRAPPORTAGE 2011, *supra* note 92, at 11; ACM, TRENDRAPPORTAGE MARKTWERKING EN CONSUMENTENVERTROUWEN IN DE ENERGIEMARKT—TWEDE HALFJAAR 2012 (Authority for Consumers and Markets [Autoriteit Consument en Markt] 2013) [hereinafter ACM TRENDRAPPORTAGE 2012].

¹¹⁵ Chris von Borgstede, Maria Andersson & Filip Johnsson, *Public Attitudes to Climate Change and Carbon Mitigation—Implications for Energy-Associated Behaviours*, 57 ENERGY POL’Y 182–93 (2013).

¹¹⁶ MICKLITZ, OEHLER, PIORKOWSKY, REISCH & STRÜNCK, *supra* note 54, at 1.

¹¹⁷ ACM TRENDRAPPORTAGE 2012, *supra* note 114; OFGEM, THE RETAIL MARKET REVIEW—DRAFT IMPACT ASSESSMENT FOR THE UPDATED DOMESTIC PROPOSALS—CONSULTATION

take advantage of the predictable characteristics of consumers' behavior in order to make even higher profits. They can charge the large group of inactive consumers higher prices than those charged to the relatively smaller group of active consumers. This leads to unjustified discrimination and can have an adverse impact on competition between energy suppliers.¹¹⁸ Evidence also shows that certain consumers, namely vulnerable consumers, have even more grounds for misperception and cognitive limitations than other groups of consumers.¹¹⁹ These vulnerable consumers consequently have a high risk of paying disadvantageous, excessive prices for their energy supply and thus ending up with financial problems.

IV. MORE EFFICIENT ENERGY USE AT HOME

According to the model of the rational and responsible consumer used by the European legislator, consumers aim to consume as much energy as they need and try to minimize, as much as possible, the costs of their energy consumption.¹²⁰ In practice, however, consumers are often unaware of their energy consumption and the opportunities for their households to save energy.¹²¹ The abovementioned biases regarding the purchase of energy contracts can also be applied to the choices of consumers regarding their energy behavior and the way they deal with possibilities to apply energy efficient technologies and habits at home.¹²² For instance, households may prefer not to decrease their energy use as they do not want to lower their standard of living (status quo bias and loss aversion), or they make simplified decisions about their energy use as they are unaware of their consumption and costs. For policymakers it is important to understand why consumers behave the way they do regarding their energy use at home, whether there are differences between different groups of

PAPER 135B/12, at 35–36 (Office of Gas and Electricity Markets 2012); ECME CONSORTIUM, *supra* note 82, at 61.

¹¹⁸ Monica Giulietti, Catherine Waddams Price & Michael Waterson, *Consumer Choice and Competition Policy: A Study of the UK Energy Markets*, 115 ECON. J. 949, 963 (2005); OFGEM, WHAT CAN BEHAVIOURAL ECONOMICS SAY ABOUT GB ENERGY CONSUMERS?, *supra* note 13.

¹¹⁹ See, e.g., FDS INTERNATIONAL, RESEARCH REPORT ON VULNERABLE CONSUMERS' ENGAGEMENT WITH THE ENERGY MARKET (2008); Ipsos MORI, CUSTOMER ENGAGEMENT WITH THE ENERGY MARKET—TRACKING SURVEY (2011); OFGEM, CONSUMER VULNERABILITY STRATEGY—FINAL DECISION 102/13, *supra* note 51.

¹²⁰ Proposal for a Directive of the European Parliament and of the Council on Energy Efficiency and Repealing Directives 2004/8/EC and 2006/32/EC, art. 8, COM (2011) 370 final (June 22, 2011).

¹²¹ WEBER, *supra* note 10, at 392; DECC, HEAT AND ENERGY SAVING STRATEGY—CONSULTATION (Department for Energy and Climate Change 2009); OFGEM, CONSUMER ATTITUDES AND AWARENESS OF GREEN ISSUES AND ENERGY—FACTSHEET IN THE CONSUMER FIRST—ENVIRONMENTAL RESEARCH SUMMARY SERIES (The Office of Gas and Electricity Markets 2008).

¹²² WEBER, *supra* note 10.

consumers, and which types of measures could be targeted at (different groups of) consumers to behave in a more energy efficient way.¹²³

Various empirical studies have set out to identify the best interventional measures to achieve more energy-efficient behavior of consumers regarding their household energy use. Certain studies have shown that giving feedback, and particularly frequent and direct feedback, can reduce energy consumption in households.¹²⁴ A combination of interventional strategies, such as providing information, feedback, and personal advice, appears to be most effective in reducing households' energy consumption.¹²⁵ More research is needed, however, to establish whether the observed behavioral changes are more than temporary.¹²⁶ Indeed, most analyses of consumer behavior in the energy sector look at the behavior over a specific and limited period of time of a limited group of consumers, whose motivation to save energy is also more likely to be above average. For these reasons, energy supervisors should base any future interventional measures on more thorough and comprehensive research, also investigating whether further distinctions between different groups of consumers must be made.¹²⁷

V. GUIDELINES FOR INTEGRATING BEHAVIORAL ECONOMICS INTO THE REGULATION OF THE ENERGY SECTOR

A. Integrating Behavioral Economics into Regulation for More Effective Governmental Policies

Though the aforementioned studies are conducted in different EU Member States with varying economic and social circumstances, a pattern may be discerned providing clear indications that the average energy consumer in practice does not behave in conformity with the model of the rational consumer that is the basis of the EU energy directives. To some extent the biases in consumer decision making in the energy market can be attributed to the complexity of

¹²³ Bernadette Sütterlin, Thomas A. Brunner & Michael Siegrist, *Who Puts the Most Energy into Energy Conservation? A Segmentation of Energy Consumers Based on Energy-Related Behavioural Characteristics*, 39 ENERGY POL'Y 8137 (2011).

¹²⁴ Hunt Allcott & Sendhill Mullainathan, *Behavior and Energy Policy*, 327 SCIENCE 1204 (2010); Wokje Abrahamse, Linda Steg, Charles Vlek & Talib Rothengatter, *A Review of Intervention Studies Aimed at Household Energy Conservation*, 25 J. ENVTL. PSYCHOL. 273, 281 (2005); Sarah Darby, *Smart Metering: What Potential for Householder Engagement?*, 38 BUILDING RESEARCH & INFO. 442 (2010); Brounen, Kok & Quigley, *supra* note 11; BLOM, BLES, LEGUIJT, ROOIJERS, VAN GERWEN, VAN HAMEREN & VERHEIJ, *supra* note 35, at 111–16; AECOM, ENERGY DEMAND RESEARCH PROJECT: FINAL ANALYSIS (2011).

¹²⁵ Abrahamse, Steg, Vlek & Rothengatter, *supra* note 124, at 282.

¹²⁶ *Id.* at 273–91; Pollitt & Shaorshadze, *supra* note 36, at 21; BLOM, BLES, LEGUIJT, ROOIJERS, VAN GERWEN, VAN HAMEREN & VERHEIJ, *supra* note 35, at 113.

¹²⁷ Pollitt & Shaorshadze, *supra* note 36, at 21; Abrahamse, Steg, Vlek & Rothengatter, *supra* note 124, 273–91; BLOM, BLES, LEGUIJT, ROOIJERS, VAN GERWEN, VAN HAMEREN & VERHEIJ, *supra* note 35, at 113.

the information regarding energy contracts, prices, and conditions, as well as to the uncertainties about future costs and benefits of different types of energy contracts and to the purchase of more expensive energy efficient appliances. These characteristics of the energy market result in certain search and transaction costs for the consumers that drive them to stay with (financially less attractive) default options. Several reports show that especially vulnerable consumers may be confronted with overly expensive energy contracts. Those consumers also run the risk of being excluded from technological innovations, such as smart meters, smart grids, and demand response programs. Additionally, limited consumer participation in the energy market and environmentally unfriendly choices, may lead to external effects, including the distortion of competition on the retail market and negative effects for the environment.

Considering the characteristics of the energy market and the external effects of consumer behavior on this market, there are good reasons to argue that a target group-specific consumer policy in the energy sector is justified. From a legal perspective this would mean that the average energy consumer would not be interpreted as a rational *Homo Economicus*. Instead the average energy consumer is seen as a real, trusting consumer with limited time and certain biases who may need some extra help to participate in a rational and responsible way in the energy market.

However, the European Union and its Member States should conduct more thorough empirical studies into the preferences and biases of the behavior of energy consumers and investigate which type of energy consumers may be distinguished. This research should take into account that the intensity of consumers' preferences and biases may differ across and within EU Member States, depending on external factors such as social norms, income, and climate. It is important for policymakers to have a well-founded, realistic, and nuanced image of consumers' behavior in order to design effective remedies that can be targeted to the characteristics of different groups of energy consumers to stimulate behavioral change.¹²⁸ For instance, the expected increase in energy prices raises the question of which consumers belong to the group of vulnerable consumers that may require additional protection or need assistance if they are to fulfill the roles envisaged by the legislator. Unlike in the United Kingdom, this issue has received little attention in the Netherlands, with the risk that rising numbers of consumers may ultimately be unable to continue paying their energy bills.¹²⁹

More thorough empirical research is also needed to establish whether the reasons for different behavior than envisaged by the legislator within the rational choice model can primarily be attributed to a lack of information or to search costs (according to the theory of "bounded rationality"), or whether

¹²⁸ Korobkin & Ulen, *supra* note 74; Maria Lissowska, *Overview of Behavioural Economics Elements in the OECD Consumer Policy Toolkit*, 34 J. CONSUMER POL'Y 393, 397 (2011).

¹²⁹ OFGEM, PROPOSALS FOR A NEW CONSUMER VULNERABILITY STRATEGY, *supra* note 49.

other psychological factors, such as the status quo bias, hyperbolic discounting and simplified decision-making strategies, also play a role in prompting consumers, unconsciously, to make non-optimal choices. The legislator and supervisory authorities need to be much more aware that consumer empowerment—through the imposition, for example, of information disclosure obligations on energy suppliers—may be counterproductive if consumers are not actually interested in making informed decisions. In such circumstances, empowerment may simply reinforce the behavior that the legislator is seeking to discourage; for example, consumers switching to contracts that are not beneficial for them. If they wish to follow a behavioral economics approach by taking into account recurring biases in the behavior of the energy consumers, governments could consider opting for a more paternalistic form of intervention, such as pre-set contract templates with standard terms or default contracts.

The following parts illustrate what are the relevant legal principles for the integration of behavioral insights in the regulation of the energy sector. They will discuss the limits and possibilities of using a behavioral economics approach to stimulate energy consumers to act in a responsible and active way. The focus here is on the different (legal, economic, psychological) tools that the legislator and supervisory authorities may use to promote consumer participation in the energy market.

B. Flexible Mandate for Energy Supervisors

First, it is important for Member States to ensure, in accordance with European law, that energy supervisory authorities have sufficient competences and scope to effectively protect and promote consumers' interests.¹³⁰ In principle, the Third Package's directives do not present any obstacles for national legislators in this respect; the latter can choose whether to oblige supervisory authorities to assess *ex ante* the impact that measures promoting consumer empowerment have on the behavior of consumers.¹³¹ If this were required, supervisory authorities would proactively have to assess the potential effects of the proposed measures on consumers' behavior, based on sound empirical research. Their interventions would then have to be tailored to accommodate the expected changes in consumers' behavior. Furthermore, the supervisory authorities would also be required to evaluate the effects of the applicable regulatory instruments already in place and adjust or withdraw them, for instance, because they have become superfluous as a result of more experienced and mature consumer behavior.¹³²

¹³⁰ Directive 2009/72/EC, *supra* note 3, arts. 36–37.

¹³¹ Saskia A.C.M. Lavrijssen & Annetje T. Ottow, *The Legality of Independent Regulatory Authorities*, in *THE ECLIPSE OF THE LEGALITY PRINCIPLE IN THE EUROPEAN UNION* 73 (Leonard F.M. Besselink, Frans Pennings & Sacha Prechal eds., Kluwer Law International 2011).

¹³² Schinkel, *supra* note 9.

C. Mix of Instruments

Second, it is important for supervisory authorities to be able to choose from a mix of legal, economic, and psychological tools if they are to encourage energy consumers to participate in the market actively and to save energy in their households. In doing so, they will have to respect the conditions imposed by European law, including the free movement and competition provisions, and the general and sector-specific consumer directives. The various consumer empowerment instruments can be divided into (1) remedies that stimulate more energy efficient behavior of consumers; (2) remedies that stimulate the purchase of green energy; (3) remedies that stimulate the exercise of the right to choose one's supplier and (4) remedies targeted at vulnerable customers.

In line with the European proportionality principle, supervisory authorities should select the appropriate and necessary regulatory tools that harm the least other interests, such as the commercial freedom of businesses and effective competition.¹³³ In line with the premise of the free choice of supplier and the proportionality principle, consumers should be encouraged, wherever possible, to make optimal choices in terms of price, conditions, sustainability, and quality. Thaler and Sunstein speak in this respect of "libertarian paternalism," whereby rather than making choices on behalf of consumers, the legislator and supervisory authorities seek to influence consumers' behavior by, for example, giving them user friendly information about different choices.¹³⁴

Taking into account the proportionality principle, it is advisable that authorities first consider whether informational remedies are sufficient to target certain biases of consumer behavior. Heavier interventions should be considered only if less intrusive measures for regulating the disclosure of information fail and the supervisory authorities show that less far-reaching measures were not sufficient to achieve changes in behavior.¹³⁵

A behavioral economics approach to the regulation of the energy sector demands the imposition on energy suppliers of information disclosure obligations that extend beyond the traditional economic approach based on the rational choice model and the "bounded rationality" theory.¹³⁶ According to behavioral economics, it is not the disclosure of information, but primarily the disclosure of high-quality, user-friendly information that can give consumers a better understanding of the choices available to them, and thus improves their

¹³³ Walter van Gerven, *De Beginselen "Subsidiariteit, Evenredigheid en Samenwerking" in het Europese Gemeenschapsrecht*, 36 RECHTSKUNDIG WEEKBLAD 1241–46 (1992). See also Case 331/88, FEDESA, 1990 E.C.R. I-4023.

¹³⁴ THALER & SUNSTEIN, *supra* note 12, at 5–6.

¹³⁵ Ted Gayer & W. Kip Viscusi, *Overriding Consumer Preferences with Energy Regulations*, 43 J. REGULATORY ECON. 248, 256 (2013).

¹³⁶ Fabiana di Porto, *Information Challenges for the Post-Liberalized Italian Energy Retail Markets: How Regulation and Competition Rules Shape Information Flows* 21 (paper for the fourth annual conference on competition and regulation in network industries, 2011).

ability to compare offers and to assess which choice provides them with optimal prices, quality, and sustainability.¹³⁷

Another remedy that may have a major impact on consumer behavior is the imposition of default options, such as green energy contracts.¹³⁸ The defaults may direct consumers toward contracts that are most beneficial for them, both from a financial and environmental perspective. These defaults may significantly reduce transaction costs and search costs as well non-optimal (for example, too expensive or grey) choices. Consequently, at an aggregate level defaults may promote economic and social welfare.¹³⁹ However, defaults will only have these beneficial effects if policymakers have accurate information about the preferred choices of (different) groups of energy consumers. If there is too little known about what consumers would prefer there should be a restrained use of defaults.¹⁴⁰

In Table 1, the recurring biases or characteristics in consumer behavior in the energy sector are illustrated. Table 1 makes clear how different remedies could be targeted at these characteristics to achieve certain changes in consumers' behavior that are in the consumers' own interests. At the same time, these remedies can also deal with external effects and therefore serve broader public policy goals. The table highlights the scale from lighter remedies (at the top of the columns) to heavier remedies (at the bottom of the columns), with information strategies on the one side and regulated prices on the other side of the two extremes.

1. Price Comparison Tools

One of the behavioral remedies that frequently recurs in the abovementioned table is the supervision of price comparison websites. Private websites enabling comparisons between energy suppliers (price comparison sites) can help energy consumers to process complex information.¹⁴¹ This will only happen, however, if these price comparison tools are independent, transparent, up to date, accurate, complete, accessible, and user friendly.¹⁴² Price comparison tools' independence is endangered if the tools are owned by an energy supplier, and also if they enter into profit-oriented contracts with one or two energy suppliers and consequently direct consumers primarily to these suppliers, even though the latter may not necessarily offer the most favorable

¹³⁷ Oren Bar-Gill, *Competition and Consumer Protection: A Behavioral Economics Account* 11 (NYU Center for Law, Economics and Organization, Research Paper No. 11-42, 2011).

¹³⁸ Sunstein & Reisch, *supra* note 95; Pichert & Katsikopoulos, *supra* note 17.

¹³⁹ Cas R. Sunstein, *The Storrs Lectures: Behavioral Economics and Paternalism*, 122 YALE L.J. 1826, 1882 (2013).

¹⁴⁰ Sunstein & Reisch, *supra* note 95, at 14.

¹⁴¹ Harriet C. Gamper, *How Can Internet Comparison Sites Work Optimally for Consumers?*, 35 J. CONSUMER POL'Y 333, 335 (2012).

¹⁴² CEER, CEER DRAFT ADVICE ON PRICE COMPARISON TOOLS—A CEER PUBLIC CONSULTATION PAPER 13 (Council of European Energy Regulators, C11-CEM-45-5, 2011).

Table 1. Behavioral biases and corresponding remedies

Remedies/ Behavior Bias	Free choice of supplier	Energy efficiency	Vulnerable customer	Green choices
Time-varying discounts	(1) Facilitating collective switching schemes. (2) The supervision of government-operated or privately funded (independent) price comparison tools. (3) Default contracts.	(1) Subsidies for the purchase of energy-efficient appliances. (2) Labeling (disclosure of life time energy costs of home appliances). (3) Promoting demand response (for example, by advising consumers or regulating price incentives).	(1) Personalized advice and standard personal calculations (that is, detailed customer specific projection of the cost of a tariff per year). (2) Regular information on the cheapest tariffs based on the range of tariffs provided by the current supplier. (3) Nondiscrimination obligations. (4) Setting standard (default) contracts with set tariffs and terms. (5) Setting tariff structures and regulating price levels. (6) Setting standard contracts with fixed tariffs and terms.	1. Price comparison tools making the benefits of green contracts salient.
Prospect theory	(1) Information about energy market, legislation, dispute-settlement opportunities, energy suppliers, and products. (2) Transparent and user-friendly information on conditions, costs, tariffs, and discounts. (3) The supervision of government-operated or privately funded (independent) price comparison tools. (4) Personalized advice and standard personal calculations (that is, detailed customer specific projection of the cost of a tariff per year). (5) Simple language on routine communications.	(1) Feedback on energy consumption and costs. (2) Personalized information on energy efficiency improvements.		1. Default contracts preselecting green energy.

Simplified choice strategies	(6) Regular information on the cheapest tariffs based on the range of tariffs provided by current supplier.		
	(7) Default contracts.		
	(1) Transparent and user-friendly information on conditions, costs, tariffs, and discounts.	(1) Labeling (disclosure of life time energy costs of home appliances).	(1) Labeling.
	(2) Personalized information to inactive consumers.	(2) Training sales staff to advice on energy efficient solutions.	(2) Transparent and user-friendly information on energy mix and CO ₂ effects of the contract.
	(3) Supervision of government-operated or privately funded (independent) price comparison tools.		(3) Default contracts preselecting green energy.
	(4) Default contracts.		
	(5) Standard contracts.		
Prosocial behavior	(6) Limiting number of tariffs.		
	(7) Regulatory simplicity and transparency of tariff structures.		
	(1) Labeling	(1) Information and education on energy-saving opportunities in schools and town halls.	(1) Labeling
	(2) Information on energy mix and CO ₂ effects of the energy contract.	(2) Promoting demand response (for example, by giving advice or by regulating price incentives).	(2) Default contracts preselecting green energy.

Note: Remedies are ordered from the least to the most intrusive remedies. The remedies have been inspired by various national and international reports (such as those prepared by Ofgem in the United Kingdom and ACM in the Netherlands) and EU and national energy legislation. The table is not meant to be exhaustive, but is illustrative of the types of remedies that could be targeted at recurring characteristics and biases in the behavior of energy consumers.

contracts.¹⁴³ This shows how important it is for energy supervisory and consumer protection authorities to ensure that price comparison tools comply with the above requirements and also with consumer protection legislation.

Research conducted by the Dutch ACM found the Dutch price comparison websites, as opposed to marketing channel websites affiliated to one or more energy suppliers, to be reliable and transparent, and to offer consumers wide-ranging choices and significant price advantages.¹⁴⁴ However, the research also found that, owing to product complexity, contract comparability remained difficult. In addition, there are more than ten websites regarded by the ACM as price comparison tools, and this can cause confusion among consumers.¹⁴⁵ The standard consumption values applicable to various groups of consumers (that is, estimations that consumers can use if they do not know their exact consumption levels) can also vary from one price comparison tool to another, while the way consumers enter their data may also produce differing results. There is a risk, therefore, that consumers may be put off by having to decide which price comparison tool to use and may consequently not even start comparing contracts of different suppliers.

The above could imply a greater role for governments in setting the conditions for the functioning of such price comparison tools, provided this does not hinder innovation and competition between price comparison tools from a user-friendliness and accessibility perspective. Governments could, for example, set requirements for how information and search results have to be displayed, and for how consumers have to enter their data in order to ensure proper comparisons.¹⁴⁶ A further step could be to harmonize standard consumption values and consumer profiles or to allow consumers to copy their consumption scores directly from their current energy supplier's website to the price comparison tool. Once they have entered their data, it will be only a small step for consumers to use an automated system to select the most favorable energy provider based on the information they themselves have filled in. Systems such as these can significantly reduce search and transaction costs and offer more or less customized options. They offer the possibility to consumers to step over the hurdle of status quo bias, changing preferences, and may as well counteract simplified decision-making strategies based on false perceptions. Therefore, these forms of innovation could also encourage consumers to make the choices desired by the legislator.

It is important to note that some customers, specifically those with low levels of literacy, cannot use a price comparison tool without help or advice. The legislator needs, therefore, to identify these groups of consumers and to find out how they can be assisted. The availability of alternatives to price

¹⁴³ Gamper, *supra* note 141.

¹⁴⁴ ACM, ENERGIEPRIJSVERGELIJKERS 2011—ONDERZOEK NAAR DE KWALITEIT VAN WEBSITES DIE TARIEVEN EN VOORWAARDEN VAN ENERGIELEVERANCIERS VERGELIJKEN (Authority for Consumers and Markets [Autoriteit Consument en Markt] 2011).

¹⁴⁵ *Id.* at 31.

¹⁴⁶ *Id.* at 26.

comparison tools for consumers without Internet access also must be established. Inspiration can be drawn in this respect from the Flemish Community's Institutes for Community Development (Instituten voor Samenlevingsopbouw), which provides people living in poverty with information on how they can improve their housing conditions and energy performance.

2. Instruments of Psychological Control (Nudges)

Instruments such as information disclosure obligations, price comparison tools, and the provision of direct feedback via displays and websites can be combined with instruments of psychological control. An example of an instrument of psychological control is the way that the costs and benefits of different choices are presented to consumers. This is referred to as “framing.”¹⁴⁷ The literature discussed above suggests that, when deciding whether to switch to a new energy contract or to adopt energy-saving measures, consumers are more inclined to take risks to prevent potential losses rather than to achieve potential gains relative to their current situation. Accordingly, it is very likely that consumers will sooner react to the signal or the information that they are losing money by not switching off some of their home appliances during peak hours, than to the signal that they could earn money by shifting their energy consumption outside the peak hours. The legislator can use such insights when deciding what type of feedback energy suppliers should provide to consumers on prices, costs, and consumption. The same goes for price comparison tools. If the results displayed by the price comparison tools show that consumers are losing money by not choosing for a certain contract or provider, consumers will, according to behavioral economics insights, more likely be inclined to switch than when results merely indicate the benefits of switching.

“Framing” is also a way to make consumers more aware of the long-term benefits of energy supply contracts that are environmentally friendly, as opposed to contracts supplying grey energy. Contracts for renewable energy are better for the environment, while also resulting in lower CO₂ emissions and reducing the costs to society of repairing environmental damage. Moreover, consumers seem willing to pay more for sustainable products, providing they understand how sustainable the supply contracts really are. Price comparison tools could use “framing” to display their results by, for example, placing the most environmentally friendly energy contracts at the top of the search results and transparently showing that these contracts’ long-term benefits exceed the short-term benefits of cheaper, grey energy contracts.

3. The Pros and Cons of a Behavioral Informed Approach

The advantage of the abovementioned forms of psychological control is that they entail relatively few costs, while they are effective in influencing consumers’ behavior by showing them the most favorable offer in terms of short and

¹⁴⁷ THALER & SUNSTEIN, *supra* note 12, at 39.

long-term costs and benefits.¹⁴⁸ As Will Tiemeijer indicated, however, ethics also play a role in governments' deployment of such instruments of psychological control.¹⁴⁹ Governments must ensure that consumers are not manipulated.¹⁵⁰ In other words, they should not push consumers in a direction that is not necessarily in their interest or without their being aware of such implicit or hidden influences. According to Johnson, Shu, Dellaert, Fox, Goldstein, Häubl, Larrick, Payne, Peters, Schkade, Wansink, and Weber: "if defaults have an effect because consumers are not aware that they have choices or because the transaction costs of changing from the default are too high, defaults impinge on liberty."¹⁵¹

This also gives rise to a fundamental question. Is the freedom of choice a fundamental consumer right that should, as much as possible, be respected?¹⁵² Or is it an instrument for steering the energy sector in a socially optimal way? Although many lawyers and economists may opt for the first approach,¹⁵³ the second is perhaps closer to reality. Consumers may strive for individual prosperity and happiness when making decisions, but in practice they may experience difficulties making decisions that are in harmony with these ends.¹⁵⁴ In the latter case, there are also fewer fundamental objections against influencing consumers' freedom of choice if this achieves their own and society's general prosperity objectives, especially when the nudges do not impose significant costs on consumers and on society.¹⁵⁵

According to Tiemeijer, the next question that arises is whether governments are actually able to determine the best choices for their citizens.¹⁵⁶ Governments, after all, can also make mistakes when seeking to influence consumer behavior. Incorrectly framed information, for example, can encourage consumers to make choices that will adversely affect their welfare and will not achieve the public interests as defined by the legislator. Supervisory authorities may also fail to adequately document presumed consumers biases and preferences with sound empirical evidence, resulting in defective regulatory impact assessments that form the basis of regulatory, psychological, or economic

¹⁴⁸ Sunstein, *supra* note 139.

¹⁴⁹ Will L. Tiemeijer, *Slotbeschouwing*, in *DE MENSELIJKE BESLISSER: OVER DE PSYCHOLOGIE VAN KEUZE EN GEDRAG*, *supra* note 2, at 293–310.

¹⁵⁰ Tiemeijer, *supra* note 149, at 293; Eric J. Johnson, Suzanne B. Shu, Benedict G.C. Dellaert, Craig Fox, Daniel G. Goldstein, Gerald Häubl, Richard P. Larrick, John W. Payne, Ellen Peters, David Schkade, Brian Wansink & Elke U. Weber, *Beyond Nudges: Tools of a Choice Architecture*, 23 MKTG. LETTERS 487 (2012); Sunstein, *supra* note 139, at 1893–94.

¹⁵¹ Johnson, Shu, Dellaert, Fox, Goldstein, Häubl, Larrick, Payne, Peters, Schkade, Wansink & Weber, *supra* note 150, at 492.

¹⁵² Sunstein, *supra* note 139, at 1879–81.

¹⁵³ Sabine Frerichs, *False Promises? A Sociological Critique of the Behavioural Turn in Law and Economics*, 34 J. CONSUMER POL'Y 289, 299 (2011).

¹⁵⁴ Sunstein, *supra* note 139, 1876–77.

¹⁵⁵ *Id.*

¹⁵⁶ Tiemeijer, *supra* note 149, at 293.

measures that are meant to target certain consumer biases.¹⁵⁷ After having examined several regulatory impact assessments accompanying energy efficiency and fuel standards regulations, Ted Gayer and Kip Viscusi even suggest that the “main failure of rationality is that of the regulators themselves.”¹⁵⁸ Supervisory authorities tend to focus too narrowly on elements (like energy efficiency or competition) that fall within their legal mandates. Consequently they may exclude from their analysis consumer preferences that provide reasonable explanations for consumer behavior that, considering the circumstances, may seem rational.¹⁵⁹ The result may be that the adopted measures lead to perverse effects as they stimulate consumer behavior that was not desired by the legislator or authority in the first place.

However, the abovementioned limitations and risks do not seem to be exclusively applicable to a behaviorally informed approach to the regulation of the energy sector and the use of psychological steering instruments. All sorts of government interventions may be subject to manipulation, undue influences by interest groups (regulatory capture) and regulatory failure. Therefore these dangers and limitations do not justify an outright negative view regarding the use of behavioral economics in regulatory policy. However, they do require that governments and supervisory authorities proceed in a very careful way when they target consumer behavior with legal, economic, or psychological interventions. In the first place, supervisory authorities should make sure that their actions are grounded on a clear legal base. It is also important that governments and supervisory authorities base their measures on sound empirical evidence and consider the potentially adverse effects that interventions may have on (some groups of) consumers. They must ensure that all measures (legal, economic, and psychological) comply with the principles of good governance, meaning that remedies should be transparent, reliable, objective, user-friendly, correct, and proportional, and that they function independently of any private interests.¹⁶⁰

VI. CONCLUDING REMARKS

Energy consumers have many faces. According to the European legislator, they have an important role to play in achieving the objectives of European energy policy, including a functioning energy market, affordable energy prices, and security of supply, and also in achieving EU environmental and climate goals. European and national legislators, as well as the supervisory authorities, should take these different faces of energy consumers into account when drafting legislation and policies to promote consumer participation in the energy

¹⁵⁷ Gayer & Viscusi, *supra* note 135.

¹⁵⁸ *Id.* at 263.

¹⁵⁹ *Id.*

¹⁶⁰ Leigh Hancher, Pierre Larouche & Saskia A.C.M. Lavrijssen, *Principles of Good Market Governance*, 4 J. NETWORK INDUS. 355 (2003).

market. If legislation and interventions are not sufficiently tailored to energy consumers' different roles and behavioral characteristics, the above objectives are likely to be only partially, if at all, achieved.

A behavioral economics approach to the regulation of the energy sector—where complementing and adding a nuance to the rational choice model—can provide policymakers with valuable insights.¹⁶¹ It allows them to anticipate and respond to certain characteristics of consumer behavior that are not easily explained by the rational choice model, and which may make it more feasible to achieve behavioral changes with consumers, even at relatively low costs. While the rational and responsible consumer serves as an ideal for the legislator, the concept of the average energy consumer is flexible enough to incorporate the dynamics of real consumer behavior. Insights about real consumer behavior justify the formulation of additional consumer protection provisions in the energy directives that help the real consumers to behave in a responsible a mature way. At the same time, these additional provisions could be withdrawn by the legislator when the consumers' real behavior is more in line with what the EU legislator expects from them.

However, policymakers and supervisory authorities should be aware that the integration of behavioral economics in the regulation of the energy sector is not a cure-all approach for achieving behavioral change and broader public policy goals.¹⁶² Inactive and biased consumer participation is just one of the reasons that may explain the malfunctioning of the retail energy markets. Effective competition and active consumer participation may also be distorted by the still strong market positions of the incumbent production and supply companies. In many EU Member States the energy companies are lagging behind in offering innovative, green, and competitive services to consumers. Furthermore, there may be failures in the legal framework governing the energy sector, in that governments fail to adequately implement the EU legislation for the energy sector, for instance, by not attributing adequate and autonomous regulatory and enforcement powers to supervisory authorities.¹⁶³ It should also be noted that performing sound empirical research into consumer behavior in the energy sector is a costly and time-consuming activity. Governments and authorities should have sufficient financial and personnel resources as well as the willingness to spend enough time and resources to perform a proper empirical investigation. If they do not, there is a serious risk of regulatory failure, in that the heterogeneous preferences of consumers will not be adequately documented and the resulting measures will have perverse effects.

Once governments and supervisory authorities have considered all the pros, cons, and limitations of a behavioral approach toward the regulation of the energy sector, they can combine traditional information remedies with

¹⁶¹ Rischkowsky & Döring, *supra* note 81, at 308.

¹⁶² Frerichs, *supra* note 153.

¹⁶³ Lavrijssen & Ottow, *supra* note 131.

innovative nudges, such as defaults, to influence consumers in the desired direction. This approach also offers the flexibility to adapt or withdraw measures once consumers have sufficient experience choosing an energy supplier and adopting energy-saving measures, and when non-optimal decisions become less frequent. In such cases, paternalistic instruments of control can become superfluous, at least to a certain extent.¹⁶⁴

Although national supervisory authorities, such as Ofgem and ACM, and the European Commission were the first to take steps to integrate a behavioral economics approach into their regulation of energy markets, being able to do so consistently and effectively represents a challenge for all European and national legislators and supervisory authorities. This article provides various guidelines for shaping this integration. These guidelines set out a direction for regulating the energy sector, but also give a more nuanced and realistic picture of what can be achieved with a behaviorally informed approach.

¹⁶⁴ Schinkel, *supra* note 9.